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LUBRICANTS IN CUTTING TOOLS FOR DRY MACHINING

ABSTRACT OF THE DISCLOSURE

Workpiece cutting tools, such as drills, are often provided with through holes that preferably extend from the cutting end of the tool along its length to the holding end. In accordance with this invention, such through holes of a cutting tool are filled with a lubricating oil-in a thermoplastic polymer matrix by injection or molding of the mixture into the holes. In the operation of the tool, the oil thus stored within the tool flows in the polymer matrix to the cutting site to reduce cutting power requirements and wear of the tool. Through the use of such cutting tools, the use of metal removal fluids can be eliminated and dry machining facilitated.